

Directors Report - Flow Control 2016

Flow control valves:

1. Given most authorities are loathed to give direction or advise, due to litigating, unknown factors and conditions at the time.
2. GWSC researched best professional advice, given all the unknowns no clear solution is finite.
4. Out of 133 Users 23 use less than 1000Liters per season, 110 Users use water in varying degrees.
5. Without "Flow Control Valves" the distribution of the system water can be compromised by noncompliant pipework and fittings that can fail during a fire event or any other time, high pressure flowing through a 20mm aperture will empty the main tank very quickly compromising the Hydrant use at a critical time.
6. The bore can pump 450Litres per minute 27000Litres per hour, 18.52Hours to fill the 500,000 tank from empty. This is without any draw off from the main during the off peak pumping cycle.

Scenario 1: Assuming 110 users take off 15lts per minute, 1650Ltrs per minute, 99,000ltrs per hour 5 hours to empty tank without pumping, with the pump filling tank at 27000Ltrs per hour, the tank may empty in 6.94 hours.

Scenario 2: Assuming all users have totally filled their tanks and have adequate reserves of water to manage their own firefighting systems thus allowing the water in the GWSC holding tank to be available for hydrant use only coupled together with inflows from the bore of 27000 litres per hour and depending on the number of CFS unit's active and using the hydrants at any one time, the system would be less compromised and more effective in helping to protect lives and property

After much deliberation GWSC decided the only way to get answers, is to install flow control devices rated for 15Litres per minute, giving each member 900Litres per hour and 21600Litres per 24Hours.

There are many issues to evaluate and the aim is to see how the community adjust and manage the change. To be reviewed at the next AGM in 2017.

The original build of the system as seen in the engineers' report quote...

"Domestic.

The minimum available flow of 13 litres per minute under full usage situation may not be sufficient for domestic emergency use (eg firefighting).

Therefore, it is assumed that all users will be made aware that existing provisions (e.g. independent fire pump to individual tanks) will still be required." See full report.

ESCOSA Exemption is subject to GWSC compliance with DEWNR-NRM regulations and licensing.

1. Installation of Meter on the bore manifold is essential to this process and is now installed.
2. A "Risk Analysis Plan" currently being prepared by the Board is require for GWSC, DEWNR, ESCOSA and the CFS.

Tank Issues

- a. Future increases holding capacity is under review and will be further considered when modification to ensure System efficiencies are completed.
- b. Monitoring will take place over the Summer Months to see if the system can cope and fulfil requirements.

Upgrading Meter Boxes to comply with new regulations and safety issues.

- a. Fire proofing
- b. Dual non-return valves (Double Check Valve)
- c. Copper pipework
- d. Flow control valve
- e. Shut off Valve